



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,554	12/22/2003	Demetrios James Tsillas	E2003-701010	5061
37462 7590 03/28/2011 LANDO & ANASTASI, LLP ONE MAIN STREET, SUITE 1100 CAMBRIDGE, MA 02142				
EXAMINER NOORISTANY, SULAIMAN				
ART UNIT 2478		PAPER NUMBER		
NOTIFICATION DATE 03/28/2011		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@LAIaw.com

gengelso@LAIaw.com

**Office Action Summary****Application No.**

10/743,554

**Applicant(s)**

TSILLAS, DEMETRIOS JAMES

**Examiner**

SULAIMAN NOORISTANY

**Art Unit**

2478

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/14/2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsman's Patent Drawing Review (PTO-940)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

***Detailed Action***

This Office Action is response to the application (10743554) filed on 02/18/2011.

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 7 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/18/11 has been entered.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed,

had possession of the claimed invention. More specifically, the applicant fails to sufficiently point out or describe using bridge identifier ***before, during and after***.

The specification of this application under examination does not contain subject matter to implement limitations, as cited in the following claims.

Claim 1 recites newly presented claim limitation "***before, during and after***". Also, it is not apparent how "using bridge identifier *before, during and after*" is determined.

Examiner has reviewed the specification of this application under examination (and OCR whole document) and could not find support for the additional limitations as claimed. Examiner is interpreting this limitation as "i.e., using bridge identifier ***periodically***" for the purpose of this office action.

### ***Specification Objection***

The disclosure is objected to because of the following informalities: Examiner has reviewed the specification of this application under examination and could not find support for the additional limitations as claimed "using bridge identifier ***before, during and after***". Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1-16 are rejected under 112, second paragraph as being indefinite for failing to particularly point and distinctly claim the subject matter which applicant regards as the invention

In claim 1, recites " using bridge identifier ***before, during and after***" in line 15 and 18 is not clear whether this intended to be the same as "using bridge identifier **periodically**". However, the claims will be given a broad reasonable interpretation for the purposes of examination as best understood.

Claims 2-16 are rejected for similar reasons as stated for claim 1.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**Claims 1-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over "**Kotser**" **US 20030037162** in view of "**Ishii**" **US 20010021177** further in view of "**Dey**" **US 6801506**

**Regarding claim 1**, Kotser teaches wherein a method for determining a spanning tree, the method comprising acts of:

determining a root bridge identifier (**e.g., spanning tree paths to the bridge with highest priority root identifier are quickly learned throughout the bridged**

**LAN - [0015, 0010; 0057]), the root bridge identifier (e.g., highest priority root identifier [0015]) being used as a root bridge identifier in a plurality of network forwarding devices (e.g., originates configuration messages (by transmitting “the root bridge ID”) on all the LANs to which it is attached, at regular intervals – [0012-013]), the plurality of network forwarding devices (e.g., Fig. 1, unit 18-22 “Label Switching Routers (LSRs) 18, 19, 20, 21 and 22 across Label Switching Paths (LSPs) 23, 24, 25, 26 and 27” [0054-0055]) including a first network forwarding device (e.g., Fig. 1, units 18-22 “switches”) and a second network forwarding device (e.g., Fig. 1, units 18-22 “switches”) participating in a network (e.g. Fig. 1, unit 12), the first network forwarding device (e.g., Fig. 1, switches 18-22) including at least one first port not running spanning tree protocol (e.g., e.g., unit 18 “NOTE: switch 22 is connected to user by second port which is different and not running the spanning tree protocol” – [0054-0055]), the second network forwarding device (e.g., Fig.1, switch 22) including at least one second port not running the spanning tree protocol (e.g., Fig. 1, switch 22 “NOTE: switch 22 is connected to user by second port which is different and not running the spanning tree protocol” – [0054-0055]), the first network forwarding device coupled the second network forwarding device coupled through a core network via the at least one first port and the at least one second port (e.g., Fig. 1, unit 18-22 are coupled through ports or paths 23-27); and**

using the root bridge identifier before, during and after, by the first network forwarding device and the second network forwarding device, and without exchanging the root bridge identifier in a network message (e.g., Fig. 3, 5, The LSR identifies the

**special label, and sends the encapsulated frame to its STP processing unit – [0031, 0054, 0060, 0064]).**

wherein the first network forwarding device exchanges data packets with the second network forwarding device through the core network via the at least one first port and the at least one second port before, during and after **(e.g., the root bridge periodically transmits configuration BPDUs, which refresh the configuration information of all bridges in the network [0016]).**

Kotser merely discloses the term “reconfiguration of the same spanning tree”

Ishii teaches that it is well known to have system wherein reconfiguration of the same spanning tree **(e.g., regular operations are required for reconfiguring a spanning tree that has been configured due to a bridge fault or addition of new bridge - [0041-0052, 0061, 0065-0066, 0081, 0214])** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser’s invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

Kotser merely discloses the term “storing, by the first network forwarding device and the second network forwarding device”

Dey teaches that it is well known to have system wherein storing, by the first network forwarding device and the second network forwarding device **(e.g., Fig. 3, unit 330: a spanning tree entity running one or more instances of a spanning tree process or protocol stores a record of spanning tree parameter information and**

**port states in a non-volatile memory – col. 5, lines 29-33)** in order to make the system more efficient by the spanning tree entity which verifies whether the parameter information in the non-volatile memory is still valid (col. 5, lines 33-37).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for the spanning tree entity that verifies whether the parameter information in the non-volatile memory is still valid (col. 5, lines 33-37), as taught by Dey.

**Regarding claim 2,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the act of determining the root bridge identifier includes an act of configuring, at the first network forwarding device and the second network forwarding device, the root bridge identifier as being the root bridge in the spanning tree **(e.g., in Fig. 5-6 “an operation for reconfiguring a spanning tree within a short time is executed”)** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 3,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein at the first network forwarding device and the second network forwarding device, a same root bridge path cost **(e.g., a data portion of the**



**above mentioned BPDUs include at least root ID, bridge ID, root path cost – [0020])** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 4,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the act of determining a root bridge identifier further comprises an act of configuring, in a first respective memory of the first network forwarding device and the second network forwarding device, an entry for the root bridge identifier (**e.g., in Fig. 5-6 “an operation for reconfiguring a spanning tree within a short time is executed”**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 5,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein, for at least one first respective access port of the first network forwarding device and the second network forwarding device, a root path cost (**e.g., a data portion of the above mentioned BPDUs include at least root ID,**

**bridge ID, root path cost – [0020])** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 6,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the root path costs for the at least one first respective access port of the second respective network forwarding device are the same value (e.g., **a data portion of the above mentioned BPDUs includes at least root ID, bridge ID, root path cost – [0020])** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 7,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the network includes a bridged network that couples the first network forwarding device and the second network forwarding device, and wherein the method further comprises an act of disabling, on the at least one first port and the at least second port, transmission of bridge protocol data units (BPDUs) between the first network forwarding device and the second network forwarding device (e.g.,

**communication is disabled between bridges A and B for any reason, communication between node "n1" connected to bridge B and node "n2" connected to bridge C is also disabled – [0081])** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214].

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 8,** The modified art together taught the method as in claim 1 above. Kotser further teaches wherein using Multiprotocol Label Switching (MPLS) (e.g., **Fig. 1, unit 12 - MPLS – [0031]**).

**Regarding claim 9,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein, on at least one first respective access port and the at least second respective port, bridge protocol data units (BPDUs) (**Fig. 5-6 -- configuration bridge protocol data unit (BPDU) message**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214].

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 10,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the first network forwarding device and the second network forwarding device are coupled by another network, and the method further comprises communicating the root bridge identifier in at least one BPDU transmitted on the another (**Fig. 5-6 -- configuration bridge protocol data unit (BPDU) message**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 11,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the network includes a bridged network that couples the first network forwarding device and the second network forwarding device, and wherein the method further comprises an act of disabling, on at least one first logical connection of the at least first network forwarding device coupled to the bridged network and at least second logical connection of the second network forwarding device coupled to the network, transmission of bridge protocol data units (BPDUs) between the first network forwarding device and the second network forwarding device (**e.g., communication is disabled between bridges A and B for any reason, communication between node "n1" connected to bridge B and node "n2" connected to bridge C is also disabled**

– **[0081]]** in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed **[0214]]**).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii **[0214]**.

**Regarding claim 12**, The modified art together taught the method as in claim 1 above. Kotser further teaches wherein using Multiprotocol Label Switching (MPLS) (**MPLS – [0031]]**).

**Regarding claim 13**, The modified art together taught the method as in claim 1 above. Ishii further teaches wherein on at least one respective access port of the first network forwarding devices and at least one second respective port of the second network forwarding device, bridge protocol data units (BPDUs) (**e.g., Fig. -5-6 -- configuration bridge protocol data unit (BPDU) message**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed **[0214]]**).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii **[0214]**.

**Regarding claim 14**, The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the first network forwarding device and the second network

forwarding device are coupled by another network, and the method further comprises communicating the root bridge identifier in at least one BPDU transmitted on the another network (e.g., in Fig. 5-6 “an operation for reconfiguring a spanning tree in at least one BPDU within a short time is executed”) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 15,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the first network forwarding device and the second network forwarding device are located at the edge of a provider network, and wherein the further comprises an act of disabling, on at least one first respective port of the first network forwarding device and on at least one second respective port of the second network forwarding device, each of the first and second respective ports being coupled to the provider network, transmission of bridge protocol data units (BPDUs) between the first network forwarding device and the second network forwarding device (e.g., **communication is disabled between bridges A and B for any reason, communication between node "n1" connected to bridge B and node "n2" connected to bridge C is also disabled – [0081]**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

**Regarding claim 16,** The modified art together taught the method as in claim 1 above. Ishii further teaches wherein the root bridge identifier is not assigned to any network forwarding device in the spanning tree (**bridge D transmits the BPDU having root ID changed to the MAC address of the bridge D itself from the representative port D to blocked port B of bridge C – [0216; “inferior” - 0219; 0244]**) in order to make the system more efficient for reconfiguring a spanning tree within a short time is executed [0214]).

Thus, it would have been obvious to one ordinary skill in the art when the invention was made to modify Kotser's invention by utilizing an operation for reconfiguring a spanning tree within a short time is executed, as taught by Ishii [0214].

#### ***Response to Amendment***

Applicant's arguments with respect to claim(s) 1-16 have been considered but are moot in view of the new ground(s) of rejection.

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sulaiman Nooristany whose telephone number is (571) 270-1929. The examiner can normally be reached on M-F from 9 to 5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeff Pwu, can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SN 3/16/2011

/Jeffrey Pwu/

Supervisory Patent Examiner, Art Unit 2478